5

10

15

## ABSTRACT OF THE DISCLOSURE

The method of measuring surface motion is for measuring motion of each portion of an object surface from a sequence of unit images of the object including first and second unit images, and includes the step of determining a plurality of measurement points in the image of the object of the first unit image. The plurality of measurement points have a hierarchical structure of a plurality of levels, with the upper level layer having larger number of measurement points than the lower level layer. The method further includes the step of determining points in the image of the object of the second unit image, corresponding to the measurement points of the first unit image of the lowest level among the plurality of levels of the hierarchical structure, and the step of repeating, starting from the level immediately above the lowest level up to the highest level, based on the points corresponding to the measurement points of the first unit image in the level immediately lower than the present level in the image of the object of the second unit image, points corresponding to the measurement points of the first unit image in the image of the object of the second unit image for each level.